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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,727	11/06/2001	Tsuyoshi Okada	33984	9438

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EXAMINER
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LE, VU

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/993,727

Applicant(s)

OKADA ET AL.

Examiner

Vu Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-6-01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on May 9, 2000. It is noted, however, that applicant has not filed a certified copy of the Japan P. 2000-136044 application as required by 35 U.S.C. 119(b).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 5-6, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites two obstacle sensing units, however, both appear to imply the same functionality and/or characteristics, in effect, duplicate of each other. The "second" obstacle sensing unit does not further limit the claim as a whole when read in light of the "first" obstacle sensing unit.

Clarification is required. For the purpose of art rejection, claim 3 will be read as having only one obstacle sensing unit.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahi et al, EP 1022903 A2.

Re claims 1-2, Asahi et al discloses a driving assistance apparatus for displaying and guiding a peripheral condition of a vehicle in an easily understanding manner (fig. 1), comprising:

a camera mounted on a peripheral portion of the vehicle (2);

an virtual observing point converting unit which converts an image picked up by the camera into an image viewed from a virtual observing point (paragraph 0020, 0023);

a image synthesizing unit which synthesizes the images viewed from a virtual observing point to display a peripheral condition of the vehicle (11, paragraph 0019-0023, paragraph 0030-0032, 0076);

an obstacle sensing unit which senses presence of an obstacle and which measures at least one of a distance from the own vehicle up to an obstacle and a direction of the obstacle (6, paragraph 0016, 0030, 0033, 0058(9)).

Asahi et al does not specifically disclose a safety area predicting unit which predicts a safety area of the peripheral portion of the own vehicle, in which the obstacle is not present, based upon the information acquired by the obstacle sensing unit as recited in claim 1; and the safety area superposing unit which superposes the safety area on the image synthesized by the image synthesizing unit for display the superposed area as recited in claim 2.

However, in Asahi et al, the display screen (19) not only shows the image captured by the camera (2, paragraph 0015), but also shows the obstacle finder and warns the driver if the vehicle is too close to an obstacle through the process of superimposition (paragraph 0031, 0058(9)). Therefore, it would have been obvious and reasonable to conclude that "a safety area" is implicitly taught in Asahi et al because such information to display to the driver the vehicle's proximity to the obstacle detected. Again, the captured image, obstacle information and inter alia, are superimposed on the display (19).

Re claim 7, "[T]he driving assistance apparatus as claimed in claim 2, wherein the safety area superposing unit superposes the safety area predicted by the safety area predicting unit on the image synthesized by the image synthesizing unit in at least one of a flickering display manner, a half-tone dot meshing display manner, and a transparent color display manner[.]" (Asahi et al paragraph 0032).

Re claim 3, as indicated in the 112 2<sup>nd</sup> paragraph rejection above, claim 3 will be read as having only one obstacle sensing unit since there is confusion as to whether the two obstacle sensing units are the same. For that reason, claim 3 has essentially the same scope as claim 1. Therefore, the limitations recited in claim 3 have been analyzed and rejected w/r to claim 1.

Re claim 8, "[T]he driving assistance apparatus as claimed in claim 3, wherein the obstacle area superposing unit superposes the obstacle area predicted by the obstacle area predicting unit on the image synthesized by the image synthesizing unit in

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at least one of a flickering display manner, a half-tone dot meshing display manner, and transparent color display manner[.]” (Asahi et al paragraph 0032).

***Allowable Subject Matter***

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 5-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Claim 4 recites “[T]he driving assistance apparatus as claimed in claim 1, wherein the obstacle sensing unit corresponds includes a distance measuring sensor capable of measuring a distance from the own sensor up to the obstacle, and outputs the shortest distance from the own vehicle among the detected obstacles as the distance up to the obstacle, wherein the safety area predicting unit predicts a safety area corresponding to an area is detectable by the distance measuring sensor and the area is located within one of a sphere and a circle where the distance up to the obstacle is defined as a radius, while amounting position of the distance measuring sensor is used as a center of the sphere or the circle[.]” The prior art fails to anticipate or render obvious the characteristics of the obstacle sensing unit and the safety area predicting unit in the manner as claimed.

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Claim 5 recites "[T]he driving assistance apparatus as claimed in claim 3, wherein the obstacle sensing unit includes an ultrasonic-wave sensor capable of measuring a distance from the own sensor up to the obstacle, and outputs the shortest distance from the own vehicle among the detected obstacles as the distance up to the obstacle; and wherein the obstacle area predicting unit predicts an area where an obstacle is present, that corresponds to an area detectable by the ultrasonic-wave sensor, and the area located outside one of a sphere and a circle where the distance up to the obstacle is defined as a radius, while a mounting position of the ultrasonic-wave sensor is used as a center of the sphere or circle[.]" The prior art fails to anticipate or render obvious the characteristics of the obstacle sensing unit and the safety area predicting unit in the manner as claimed.

Claim 6 recites "[T]he driving assistance apparatus as claimed in claim 3, wherein the obstacle sensing unit includes one of an ultrasonic-wave sensor having a plurality of ultrasonic-wave oscillating sources and an ultrasonic-wave sensor capable of varying a direction of the scanning operation, wherein the obstacle area predicting unit grasps a substantially shape of the obstacle which is faced to a side of the own vehicle based upon the information derived from the obstacle sensing unit, and predicts the area where the obstacle is present, which involving a dimension of the obstacle[.]" The prior art fails to anticipate or render obvious the characteristics of the obstacle sensing unit and the safety area predicting unit in the manner as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Contact**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is 703-308-6613. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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